

REPLY



We thank Dr Singh Mahla for his interest in our study.¹ Part of our motivation to publish these data was to address the misconception that intrauterine devices (IUDs) should be used only for contraception and are linked directly to sexual activity, including the assumption that only sexually active women are able to tolerate an invasive pelvic exam.

As reviewed in the background of our study, hormonal IUDs have many noncontraceptive benefits.¹ This treatment option should not be withheld from adolescents suffering from dysmenorrhea, chronic pelvic pain, and heavy menstrual bleeding because of the lack of sexual activity. By offering different treatments to adolescents based on sexual activity status, we are discriminating against girls who are not sexually active.

We would like to clarify that levonorgestrel-containing IUDs were the primary IUDs placed in our study, and the background thus focused on the noncontraceptive benefits of hormonal IUDs.¹ The copper (Cu T 380a) IUD was placed in very few ($n = 3$) sexually active participants in our study.¹ In the retrospective cohort study from Bangladesh quoted by the author, only copper IUDs were studied, which we believe is not applicable to our study.² The mechanism of action significantly differs between these devices.

To the author's second point, the purpose of our study was not to address protection against sexually transmitted diseases. The author asserts that hormonal IUDs accelerate HIV infection, but this is not consistent with our review of the literature, including a recent systematic review.³ In women using the hormonal IUD for noncontraceptive benefits, the risk of sexually transmitted infections is irrelevant because abstinence prevents these infections.

The author's statement that IUDs cause psychological and physiological harm is unfounded, and he does not provide a

reference for this claim. Our study does not argue that the IUD is the best treatment method for every patient. It does, however, illustrate that IUD insertion is tolerated well in the majority of never sexually active patients.¹ We maintain that physicians should advocate for their patients to receive the best treatment for contraception and menstrual disorders and that lack of sexual activity should not preclude adolescents from being offered this effective option. ■

Chelsea A. Kebodeaux, MD
Nemours/A. I. duPont Hospital for Children
Wilmington, DE
Department of Obstetrics and Gynecology
Christiana Care Health System
4755 Ogletown-Stanton Road, Suite 1905
Newark, DE 19718
chelsea.a.kebodeaux@christianacare.org;
chelsea.kebodeaux@gmail.com

Beth I. Schwartz, MD
Nemours/A. I. duPont Hospital for Children
Wilmington, DE
Division of Adolescent Medicine and Pediatric Gynecology
Departments of Pediatrics and Obstetrics and Gynecology
Sidney Kimmel Medical College at Thomas Jefferson University
Philadelphia, PA

The authors report no conflict of interest.

REFERENCES

1. Kebodeaux CA, Schwartz BI. Experience with intrauterine device insertion in never sexually active adolescents: a retrospective cohort study. *Am J Obstet Gynecol* 2018;219:600.e1-7.
2. Bradley JE, Alam ME, Shabnam F, Beattie TS. Blood, men and tears: keeping IUDs in place in Bangladesh. *Cult Health Sex* 2009;11:543-58.
3. Polis CB, Curtis KM, Hannafor PC, et al. An updated systematic review of epidemiological evidence on hormonal contraceptive methods and HIV acquisition in women. *AIDS* 2016;30:2665-83.

© 2019 Elsevier Inc. All rights reserved. <https://doi.org/10.1016/j.ajog.2019.02.003>

An instrument which addresses the expectations of pregnant women over childbirth



TO THE EDITORS: Recently an article entitled "Childbirth-specific patient-reported outcomes as predictors of hospital satisfaction" was published in this Journal.¹ The study concluded that practices that precede childbirth and postpartum can enhance the childbirth experience as well as the pregnant mother's and family's satisfaction. The study states that in the hospital setting, it is necessary to develop strategies to improve childbirth experience.

Hence, we consider it appropriate to add that it is fundamental to know and assess the pregnant woman's

expectations about what they expect from it because these often determine the type of delivery they choose, influencing directly in the postpartum satisfaction. Likewise, it is fundamental that health professionals provide guidance about the possibilities of situations and necessary procedures at the delivery moment, according to the yearnings reported by the woman.

It is known that when the lived experience differs from the imagined moment, the probability of dissatisfaction increases.² Thus, the selection of an instrument that addresses

adequately the expectations of the pregnant woman may be one of these strategies cited by the authors.

This is not a simple task. A systematic review that analyzed the validated instruments that measure the women's childbirth experiences verified great heterogeneity of content and quality of the instruments and did not include studies that assessed the expectations of the pregnant women.³ Although some tools have already been developed with this purpose, such as the Delivery Experience And Expectancy Questionnaire (known by the Portuguese acronym) from Portugal, Wijma Delivery Expectancy Questionnaire from Sweden, and the Salmon Questionnaire from Spain, such instruments were not validated for the reality of several countries, and, up to this moment, there is no consensus for the investigation of these phenomena.

The humanization of the practices of childbirth care is still a great challenge.⁴ Thereby, health professionals responsible for obstetric care, upon being aware of the expectations of the women, may think of new strategies to care for pregnant women to improve the care for the mother-baby binomial and therefore the satisfaction of the women. An instrument that measures the expectation of the pregnant women may be a tool that reduces the number of unnecessary cesarean deliveries and that aid in the adequate delivery; after all, each woman is different and bears different expectations, and thereby each delivery is also different. ■

Gabriela M. Marques, MD, BSc
Diego Z. Nascimento, MD, BSc
Betine P. M. Iser, MD, PhD
Postgraduate Program in Health Sciences
University of Southern Santa Catarina at Tubarão
Av. José Acácio Moreira Santa Catarina
787 - Dehon
Tubarão SC, Brazil 88704-900
gabii_moreno@hotmail.com

The authors report no conflict of interest.

REFERENCES

1. Gregory KD, Korst LM, Saeb S, McCulloch J, Greene N, Fink A, Fridman M. Childbirth-specific patient-reported outcomes as predictors of hospital satisfaction. *Am J Obstet Gynecol* 2019;220:201.e1–19.
2. Ledford CJW, Canzona MR, Womack JJ, Hodge JA. Influence of provider communication on women's delivery expectations and birth experience appraisal: a qualitative study. *Fam Med* 2016;48:523–31.
3. Nilvér H, Begley C, Berg M. Measuring women's childbirth experiences: a systematic review for identification and analysis of validated instruments. *BMC Pregnancy Childb* 2017;17:1–19.
4. Pereira RM, Fonseca GDO, Pereira ACCC, Gonçalves GA, Mafra RA. New childbirth practices and challenges for the humanization of assistance in southern and southeastern Brazil. *Cien Saude Colet* 2018;25:3517–24.

© 2019 Elsevier Inc. All rights reserved. <https://doi.org/10.1016/j.ajog.2019.02.005>

Twin-twin transfusion syndrome: need for mechanistic studies



TO THE EDITORS: We commend the systematic review and meta-analysis of Mackie et al¹ in which they assessed the ability of first-trimester pregnancy-related factors to predict complications in monochorionic (MC) pregnancies. Among the factors assessed were ultrasound measurements, maternal characteristics, and biomarkers, whereas the outcomes were primarily consequences of twin-twin transfusion syndrome (TTTS), including discrepancy in amniotic fluid volumes, growth discordance, and intrauterine fetal demise. Not surprisingly, the authors found that “it is not currently possible to predict adverse outcomes in MC twin pregnancies.”

The primary pathophysiology of MC adverse outcomes is vascular anastomoses, which result in transfusion of blood from donor to recipient, and subsequent nutrient, hematologic, and fluid dynamic alterations. Nearly all MC pregnancies have vascular anastomoses, with an average of 5–7 superficial (artery-artery, vein-vein) or deep (artery-vein/vein-artery) anastomoses, with artery-artery and vein-vein providing a protective effect from TTTS.

As the fetus grows, the linear growth of vessel diameters combined with increased cardiac output results in an approximate fourth-power increase in the net transfusion.² Thus, relatively compensated anastomoses in early

pregnancy may rapidly become imbalanced, resulting in the sudden appearance of TTTS findings.³ Additional effects of placental resistance, arterial pressure, amniotic fluid volume and pressure, blood viscosity, and unequal placental sharing may markedly alter both fluid and growth alterations.³

Accordingly, it is most important that future studies explore the detection, type, and quantification of anastomotic flow and placental sharing as well as pregnancy characteristics that may predict the likelihood of these anastomoses.⁴ It is only with a more mechanistic hypothesis-based study that one may develop truly prognostic approaches. ■

Michael G. Ross, MD, MPH
Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center
Geffen School of Medicine
University of California, Los Angeles
10833 Le Conte Avenue
Los Angeles, CA 90095
mikeros@ucla.edu

Martin van Gemert, PhD
Department of Biomedical Engineering and Physics
Academic Medical Center